

REMARKS

Claim Rejections - 35 USC § 112

Claim 13 has been amended to provide proper antecedent basis for claim terminology and to overcome the 35 U.S.C. § 112, second paragraph, ground of rejection by deleting the term "the" before "coating materials of the lead wires" and before "lead wires of the temperature sensor."

Claim Rejections - 35 USC § 103

Claims 2-5 and 13 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hall (US 4,946,440) in view of teachings of Lennox et al. (US 4,955,377) and Wijay et al. (US 4,921,483). Claims 9 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Hall (US 4,946,440) in view of teachings of Lennox et al (US 4,955,377) and Wijay et al. (US 4,921,483), and further in view of the teachings of Strul (US 5,498,261).

Reconsideration and removal of these grounds of rejection are respectfully requested in view of the above amendments to the claims and the remarks that follow.

In the present invention a catheter for use in the treating of arrhythmia is provided whereby a balloon is caused to contact closely to the cause of arrhythmia and localized ablation is

carried out using high frequency heating (specification, paragraph [0007]).

It is extremely important problem to implement accurate temperature monitoring in the balloon to carry out localized ablation in an entire circle of ostia of pulmonary vein in a short time and effectively without giving a heavy burden to a patient.

Claim 2 has been amended to include the limitations of claim 9 and claim 9 has been canceled. In the catheter of amended claim 2, a temperature sensor is provided in a fixed condition in a high frequency current-carrying electrode within the balloon, whereby the temperature sensor is capable of directly detecting the temperature thereof, so that accurate temperature monitoring within the balloon is facilitated (specification, paragraph [0086]).

New claims 34 and 35 have been added to the application. New claim 34 corresponds to original claim 2 and includes the limitations of claim 16. New claim 35 depends on claim 34 and recites that the temperature sensor is arranged close to the axis of the balloon.

In new claim 34, the temperature sensor is disposed more towards the front edge of the balloon than the central longitudinal point thereof in an inflated state, whereby the output thereof is minimally affected by charging and discharging, via an inlet for

low temperature dilute contrast media solution provided at the rear of the balloon for the purpose of mixing, so that accurate temperature monitoring of the dilute contrast media solution is facilitated (specification, paragraph [0084]).

In new claim 35, the temperature sensor, which is disposed more towards the front edge of the balloon than the central longitudinal point thereof in an inflated state, is arranged close to the axis of the balloon. Since the actions of inflation and deflation take place about the central axis of the balloon, there is reduced danger of contact between the sensor and the balloon membrane, and accordingly, the temperature sensor hardly suffers damage, so that an accurate temperature monitoring of a dilute contrast media solution is facilitated (specification, paragraph [0085]).

The combination of references cited in the 35 U.S.C. § 103(a) rejections and, particularly, Lennox which has been cited as teaching the use of a temperature sensor in an RF balloon catheter device, discloses nothing concerning the positioning of the temperature sensor as specified in the amended claims and discloses and suggests nothing concerning the effects of the specific positions of temperature sensor.

The claims as amended are believed to be patentable under 35 U.S.C. § 102 and 35 U.S.C. § 103(a) and removal of the prior art grounds of rejection is respectfully requested.

Allowable Subject Matter

Claims 14, 19 and 20 are objected to in the Action as being dependent upon a rejected base claim, but as being allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Claims 14 and 19 have been rewritten in independent form. Claims 14, 19 and 20, which depends on claim 19, are in condition for allowance.

The foregoing is believed to be a complete and proper response to the Office Action dated March 6, 2009, and is believed to place this application in condition for allowance. If, however, minor issues remain that can be resolved by means of a telephone interview, the Examiner is respectfully requested to contact the undersigned attorney at the telephone number indicated below.

In the event that this paper is not considered to be timely filed, applicants hereby petition for an appropriate extension of time. The fee for any such extension may be charged to Deposit Account No. 111833.

PATENT APPLN. NO. 10/522,788
RESPONSE UNDER 37 C.F.R. §1.111

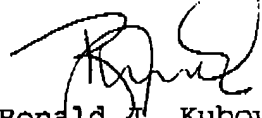
PATENT
NON-FINAL

PTO-2038 in the amount of \$712.00 for the three independent claims and the one total claim in excess of those previously paid for that have resulted from the above amendments is enclosed with this response.

In the event any additional fees are required, please also charge our Deposit Account No. 111833.

Respectfully submitted,

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